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AUTHOR Guthrie, James W.; And Others
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ABSTRACT

This paper reports on a recent study in Michigan to assess the part played by State school finance arrangements relative to social class structure. Study results supported the premise that present systems for financing public schools tend to reinforce social class distinctions. An alternative financial plan that would help equalize educational opportunity is presented. Supportive tables and statistics, as well as a 55-item bibliography, are provided. (LLR)

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EDUCATIONAL INEQUALITY, SCHOOL FINANCE, AND A PLAN FOR THE '70's*

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by

James W. Guthrie
George B. Kleindorfer
Henry M. Levin
Robert T. Stout

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Within American ideology, the prevailing view of schools is that they function as large blenders which collect children from a wide assortment of social backgrounds and provide them individually with the wherewithall to enter the race for life on an equal footing. It is even held that the child from the most humble of circumstances can take advantage of the opportunities provided by public schooling to work his way to the top ranks of success. As is the case with most myths, this one may have been grounded in reality initially and may even have some elements of validity today. However, it is our contention that this view is increasingly more a fantasy than a fact.

At one end of the continuum, children from wealthy homes and privileged localities have good schools awaiting them. Their less fortunate peers from the poor end of the social spectrum have low quality schools waiting for them. Consequently, at the end of the schooling process, initial social class differences are likely to have been magnified in a manner which is thereafter almost impossible to reduce. Moreover, contrary to conventional wisdom, we have evidence which strongly suggests that present arrangements for financing public schools serve not to

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*This paper is prepared for presentation at the National Education Association annual conference on school finance, April 6, 1970, in San Francisco, California. It is a summary of a larger work by the same authors entitled Schools and Inequality, published by the Urban Coalition in 1969.

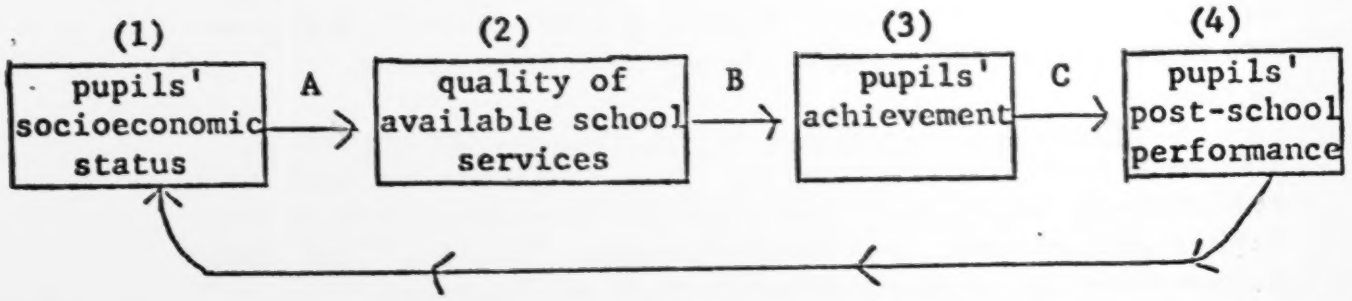
ameliorate, but rather encourage such inequities. Our purpose in this paper is to present that evidence and to suggest means by which present plans for distributing resources to schools can be rearranged in the 1970's so as to redress social inequities and restore meaning to the ideology of equal opportunity

The Study

The idea that public schools serve more to reinforce than to reduce social class distinctions is not a new one. Willard Waller made such an assertion in the 1930's, and more contemporary writers such as James Bryant Conant, John Gardner, and Charles Benson have commented upon it subsequently.[1] However, in 1969 a series of circumstances made it possible to examine this question empirically and to assess the part played in the matter by state school finance arrangements. Michigan was selected as the site for the study because of comparability to much of the industrialized portions of the nation and because of the rich supply of information regarding schools to be found there. Patterns of historical development and present day administrative arrangements tend to be unique among states and thus it is frequently impossible to generalize about a phenomenon from one to all fifty states. Nevertheless, the social and economic composition of Michigan's population and the legal and organizational arrangements surrounding its schools are sufficiently typical that we feel confident in saying that what we found there will also be true to a substantial degree in a majority of the remaining states.

The Conceptual Framework

In order to guide our research efforts, we initially postulated four conceptual components which can be diagrammed as follows:



We hypothesized that each component in this chain presently influences its successor. However, we do wish to insert a word of caution here. Quality of available school services is known to be affected by factors in addition to the socioeconomic status of the students being served; academic achievement of students is influenced by conditions other than those which take place in school; and pupils' post-school opportunity obviously depends upon more factors than simply their academic achievement. Thus, no claim is being made that each component in the above diagram is determined solely by its predecessor; such would be entirely too simple an explanation.

Nevertheless, after acknowledging the existence of additional influences, we hold that each conceptual component in the diagram is a primary determinant of its successor. This chain of causal linkage is represented by the three lettered arrows in the diagram.[2] Each of these linkages has been framed as a separate proposition to guide our research. The propositions are as follows:

> A. Socioeconomic Status and School Services.[3] The quality of school services provided to a papil is related to his socioeconomic status, and that relationship is such

that lower quality school services are associated with a pupil's being from a lower socioeconomic strata.

B. School Services and Pupil Achievement. A relationship exists between the quality of school services provided to a pupil and his academic achievement, and that relationship is such that higher quality school services are associated with higher levels of achievement.

C. Pupil Achievement and Post-School Opportunity. The post-school opportunities of a pupil are related to his achievement in school, and that relationship is such that higher achievement is associated with "success" and lower achievement is associated with lack of "success."

Data, Definitions, and Design

Having settled upon the relations to be examined, we next turned our attention to selecting a sample of school districts, obtaining a wide range of education-related information about those districts, and deciding upon analytical procedures for testing our research propositions.

Sample. In 1969, Michigan had 533 school districts containing grades Kindergarten through Twelve. Using a table of random numbers, 52 of these were selected for purposes of study. In addition, the School District of the City of Detroit was added arbitrarily because it contained approximately 15 per cent of the state's students and to have excluded it would have biased the sample greatly in favor of rural and suburban districts. Consequently, the final sample was composed of 53 local school districts, ten per cent of the total in the state.

In addition to school districts, some analyses were to be made of individual schools and individual students. These samples were taken ready made from the efforts of the Equal Educational Opportunity Survey (EEOS) conducted in 1965. In Michigan, the EEOS sampled 89 elementary

schools. In addition, it gathered data on 5,284 sixth grade students. These served as the school and student sample for this study.

Data. The major source of information was an official state-wide educational survey conducted for the Michigan legislature and published in 1968.[4] The survey was directed by Professor J. Alan Thomas of the University of Chicago, and it is described by the State Superintendent of Instruction as "the most comprehensive study of elementary and secondary education" in the State's history. Within Michigan the survey is popularly known as the "Thomas Report," after its director. We too will refer to it by this shorthand label.

In addition to data collected for the Thomas Report and the EEOS, information was also obtained from the Michigan State Department of Education, local school districts themselves, and from a variety of secondary sources.

Definitions. Testing the research propositions necessitated converting each of the four conceptual components into operationally defined variables. Socioeconomic Status (SES) came to be defined primarily in terms of demographic data from the 1960 census and the EEOS. An aggregate SES score was computed for each school district in the sample by multiplying median family income by median years of schooling in the adult population. When individual students served as the unit of analysis, their SES was computed by multiplying, for the head of their household, years of schooling by average annual income for occupational categories. School Service Quality was defined operationally by responses to approximately fifty Thomas Report and EEOS questions regarding

adequacy of physical facilities, instructional services and materials, personnel, and administrative arrangements. Pupils' Achievement came to be defined as student performance on tests of cognitive ability, and Pupils' Post-School Performance was measured from secondary sources on dimensions such as increments in individuals' lifetime earnings, occupational choice, social mobility, political participation, and social deviancy.

Design. School districts, individual schools, and individual students served separately as units of analysis. When the analysis was done for a large sample (more than 60 subjects), the design consisted of rank ordering subjects in terms of their numerical values on independent variables (SES, for example), dividing the continuum into octiles, locating the numerical value of the dependent variable (school service quality, for example) for the median subject in each octile, and then computing a correlation coefficient for the ranks of the medians and the octile sequence. RHO was the statistic employed for this purpose. In those instances where sample size was less than 60, division into octiles was eliminated and STUDENT T was the statistic used to assess the degree of rank order relationship between two sets of variables. In each instance, no result was reported unless it was significant at the .05 level or better.

Findings

Research propositions two and three are designed primarily to demonstrate that (a) the quality of schooling a student receives influences

his academic achievement, and (b) the quality of that achievement influences his post-school performance. Because of present limitations of space, the proof for these two lines of reasoning must either be assumed or the reader can refer to the complete study.[5] At this point we will limit our focus primarily to proposition one, the relationship of socioeconomic status to school service quality. In the next section we will demonstrate the connection between school finance and this relationship, and in the final section we put forth our recommendations for future restructuring of school finance patterns.

Socioeconomic Status and School Service Quality

This proposition was examined at three separate levels, for school districts, for individual schools, and for individual students. Within each level an assessment was made for approximately 50 school service dimensions. In the overwhelming preponderance of cases, the lower the measure of socioeconomic status, the lower the measure of school service quality. In order to illustrate this fact we have selected a small proportion of the overall findings. The relationships we have chosen to display pertain to the most important school service dimensions; however, the degree of disparity evidenced in these tables is not necessarily any more extreme than that which exists in the tables we have excluded from the summary.

Personnel. The principal instructional component of schooling consists of teachers, and when we examined the ability of teachers in relation to the social standing of their students we found that high SES students were much more likely to have the benefit of capable teachers.

For example, when the teacher's verbal ability level is used as a proxy for teacher quality, we find that it is distributed in relation to SES in the following fashion:

Table 1

OCTILES ACCORDING TO SOCIOECONOMIC LEVEL

MEDIANS FROM VERBAL ABILITY SCORE OF TEACHERS

OCTILE	1	2	3	4	5	6	7	8
MEDIAN	23.5	23.5	24.4	24.7	24.4	24.5	25.0	25.6

RHO = .90

Because of the nature of the verbal ability test for teachers, the range between the lowest and highest score represents a significant difference in ability. The standard deviation is about 1.5 raw score points. Thus, approximately 68 per cent of all teachers will score between 23 and 26. The low octile's median of 23.5 signifies a dramatically reduced verbal ability compared to the high octile score of 25.6.

Facilities. As is the case with teacher characteristics, so it is with physical facilities. Table 2 below illustrates this relationship.

Table 2

OCTILES ACCORDING TO SOCIOECONOMIC LEVEL

MEDIANS FROM BUILDING AGE

OCTILE	1	2	3	4	5	6	7	8
MEDIAN	7	7	5	6	7	6	4	4

RHO = -.73

According to the procedures by which these data were coded, a score of "7" in the table represents a school age of 40 years or more. At the other extreme, a score of "4" signifies a school age of between 10 and 19 years. Thus, the difference in actual years of building age is at least 20 years and possibly greater. Low SES schools also tend to be on smaller building sites, and because they have larger numbers of students, they are more crowded.

Instructional Services. From this category we can see that not only do low SES children receive instruction from less able teachers housed in less adequate facilities, but also they are less likely to have necessary instructional services available to them. For example, it is children from relatively poor families that are most likely to be in need of remedial instruction. However, when the availability of such services was examined in relation to the SES of the school district, a perverse set of circumstances was uncovered. As can be seen in Table 3 below, the more wealthy the school district, the greater the likelihood that a wide range of remedial services will be offered. Among low SES districts, only about one-half offer such services, whereas among high SES districts almost all do.

Table 3

OCTILES ACCORDING TO SOCIOECONOMIC LEVEL

MEDIANS FROM PER CENT OF DISTRICTS PROVIDING SERVICES TO CHILDREN UNABLE TO BENEFIT FROM REGULAR PROGRAM

OCTILE	1	2	3	4	5	6	7	8
MEDIAN	45	56	91	67	80	60	100	92

STUDENT T = 2.48

In addition to not offering needed services, the low SES districts tend to be slow to adopt new instructional techniques. An examination of adoption of one or more of the new science curricula (Chemical Bond Approach Project, PSSC Physics, Biological Science Curriculum Study, etc.) revealed that the highest SES districts typically had adopted three such innovations whereas the poorest districts had none (see Table 4 below).

Table 4

OCTILES ACCORDING TO SOCIOECONOMIC LEVEL

MEDIANS FROM ADOPTION OF INNOVATION IN SCIENCE INSTRUCTION

OCTILE	1	2	3	4	5	6	7	8
MEDIAN	0	1	2	1	3	2	3	3

STUDENT T = 2.97

Data available to us in this study permitted comparisons on other dimensions, health services, textbooks, school lunches, class size, teachers' salaries, and so on. In these instances, as in those few cases which we have selected to discuss above, the story is the same; the lower the social standing of the child the less likely his chances of receiving high quality service. A reasonable person might rightly be perplexed as to how such a situation can exist. How can disparities persist in the face of ever-increasing local property taxes, state financial distribution arrangements which purport to "equalize" opportunity, and federal government programs which owe their existance to the demand for an end to poverty? We attempt now to answer these questions.

School Dollars and Educational Inequality

In the year chosen for study, 1967-1968, per pupil expenditures in Michigan ranged from a high of $1,038 to a low of $412. We attempted to see if this expenditures distribution was related to measures of school district aggregate SES. The principal finding in this regard was that the higher the district SES, the higher the per pupil expenditures, local, state, and federal revenues combined (see Table 5). This finding in itself is not too surprising. It is consistent with any number of previous school finance surveys.[6] It is not until the second analytical stage that the less well publicized mechanisms of such discrimination become more evident.

Table 5

QUARTILES ACCORDING TO SOCIOECONOMIC LEVEL

MEDIANS FROM EXPENDITURE PER PUPIL, TOTAL INSTRUCTION

QUARTILE	1	2	3	4
MEDIAN	335	355	369	42(

STUDENT T = 2.93829

In the next stage of the analysis, we inquired as to the cause for the maldistribution of school support revenues. This inquiry fell into two segments, (1) an assessment of the mechanisms for generating revenue from the local property tax, and (2) an examination of the procedures by which state revenues are distributed to local districts.

Locally Generated Revenues. In the majority of states, approximately 50 per cent of school support funds are locally raised by levying

taxes against property. Michigan is no exception to this pattern. What is the distribution pattern for such locally raised revenues? Are they generated in a fashion which contributes to low expenditures in low SES districts and high expenditures in high SES districts? In order to obtain an answer to these questions, an examination was made of the relationship between measures of local school district aggregate SES and indicators of local level resource contribution. The results are recorded in Table 6. Here we can see clearly that the lower the social standing of a district's residents, the lower the amount of school revenue which is raised locally. The converse is equally evident.

Table 6

QUARTILES ACCORDING TO SOCIOECONOMIC LEVEL

MEDIANS FROM PER PUPIL ALLOCATION FROM LOCAL SOURCES

QUARTILE	1	2	3	4
MEDIAN	210	203	213	368

STUDENT T = 3.42343

The amount of money that a local school district can raise is a consequence of two factors: (1) the amount of taxable property (assessed valuation) it has behind each pupil (AV/PP), and (2) the tax rate it levies against that property. Are the low expenditures of low SES school districts a consequence of having little property to tax (low "ability") or, is the situation caused by their unwillingness to tax themselves at a rate sufficient to generate equal revenues (low "effort")? In an attempt to identify the "culprit," school district SES was first compared to levels of assessed valuation per pupil. The outcome of this

comparison is displayed in Table 7. And from the figures in this display it is evident that the residents of low SES districts simply do not have an equal tax base to tap for school support.

Table 7

QUARTILES ACCORDING TO SOCIOECONOMIC LEVEL

MEDIANS FROM ASSESSED VALUATION PER PUPIL IN HUNDREDS

QUARTILE	1	2	3	4
MEDIAN	95	116	110	148

STUDENT T = 2.25114

There is another side to the revenue generating coin, the tax rate side. When we examined "effort" in relation to district SES, we found that high SES districts do tend to tax themselves more heavily for schools. However, their higher millage rates can best be explained by (1) legal limitations in Michigan which inhibit millage increases in low SES districts,[7] (2) matters of municipal overburden which tend to fall heaviest upon low SES areas,[8] and (3) the regressive nature of the property tax generally. Even if low SES districts overcame all these obstacles and taxed themselves at a rate equal to high SES districts, they still would have difficulty generating sufficient local revenues to compensate for their lower amounts of assessed valuation.

State Distributed Funds. In Michigan, general purpose aid (as opposed to categorical programs) constitutes 90 per cent of all funds distributed by the state for the public schools, so this is where we will spend the major portion of our explanatory time. In order to

participate in the state aid plan a school district must tax itself at a specified millage rate (in accord with its equalized assessed valuation per pupil). Thereafter it receives state funds in inverse proportion to its fiscal capacity (AV/PP). The difficulty with this arrangement is that it does not equalize. It is true that wealthy school districts tend to receive less state funds per pupil than do poor school districts. However, every school district gets some amount of money from the state. For example, one of the wealthiest districts in the state ($44,450 AV/PP) received $130.34 per pupil in state aid. Consequently, even though the state funds are labeled "equalizing" they do not suffice to produce equality of resources behind every child in Michigan. This imperfection is graphically displayed in Tables 8, 9, and 10.

Table 8

QUARTILES ACCORDING TO ASSESSED VALUATION PER PUPIL

MEDIANS FROM PER PUPIL ALLOCATION FROM LOCAL SOURCES

QUARTILE	1	2	3	4
MEDIAN	168	212	281	323

STUDENT T = 4.33579

Table 9

QUARTILES ACCORDING TO ASSESSED VALUATION PER PUPIL

MEDIANS FROM PER PUPIL ALLOCATIONS FROM DIRECT STATE SOURCES

QUARTILE	1	2	3	4
MEDIAN	319	297	260	215

STUDENT T = -14.82545

Table 10

QUARTILES ACCORDING TO ASSESSED VALUATION PER PUPIL

MEDIANS FROM TOTAL ALLOCATION PER PUPIL

QUARTILE	1	2	3	4
MEDIAN	512	509	550	626

STUDENT T = 3.09559

In the first of these tables (Table 8), local school districts have been ranked in terms of their AV/PP. The amount of money generated from local sources is then displayed for the median school district in each quartile. This display illustrates the strong role played by "ability," or local school district wealth. Those districts with high levels of assessed valuation per pupil are those which generate high levels of local revenue for their schools.

In the next table (Table 9), we follow the same analytical procedure, but this time we identify the amount of direct state aid received by the median district in each quartile. Here we find a perfect negative relationship. The lower the assessed valuation per pupil of a school district, the more state aid it receives. Superficially, it appears as though state arrangements are achieving to a high degree their objective of equalization. However, when we scrutinize this table, another fact comes to light. There is only $104 difference in state payments between the median in the quartile containing the poorest districts (quartile 1) and the median in the quartile containing the wealthiest districts (quartile 4). When we examine Table 10, it is evident that this small amount of money ($104) simply does not suffice to overcome

the resource advantage provided to wealthy districts. Imperfections in the state's equalization efforts are such that the median district in the high assessed valuation quartile is able to generate a total allocation which is $114 more per pupil than the median district in the low AV/PP quartile.

The linkage of the state aid to the socioeconomic status of a district can be seen in the following two tables. In Table 11, sample school districts are ranked by their SES and the state distributed funds are displayed for the median district in each quartile. Here, it can be seen that, while low SES districts do obtain more direct state aid per pupil than high SES districts, the dollar differences are not great and do not suffice to overcome the advantage of wealth. As we can see from Table 12, high SES districts, even in the face of state aid, still manage to spend an amount for instructional purposes which is well in excess of the money spent by low SES districts.

Table 11

QUARTILES ACCORDING TO SOCIOECONOMIC LEVEL

MEDIANS FROM PER PUPIL ALLOCATION FROM DIRECT STATE SOURCES

QUARTILE	1	2	3	4
MEDIAN	269	286	288	235

STUDENT T = -2.61048

Table 12

QUARTILES ACCORDING TO SOCIOECONOMIC LEVEL

MEDIANS FROM EXPENDITURE PER PUPIL, TOTAL INSTRUCTION

QUARTILE	1	2	3	4
MEDIAN	335	355	329	420

STUDENT T = 2.93829

But What About Federal Funds? Before writing off resource quality as a present-day myth, it is necessary to consider the effects of federal funds for education. In 1967, federal appropriations accounted for almost 8 per cent of all public elementary and secondary education expenditures for the entire United States.[9] If distributed in an equalizing fashion, such an amount could substantially ameliorate revenue inequalities. However, such is not the case. The relationship in Michigan between school district AV/PP and receipt of federal funds is positive. That is, wealthier school districts tend to receive more federal dollars per pupil than do poorer districts.

For the reader who is perplexed by this finding and surprised to hear that such can occur despite the existence of dramatically publicized pieces of federal legislation such as the 1967 Elementary and Secondary Education Act, a word of explanation is in order. Federal funds flow into a state under a wide variety of legislative authorities. It is true that ESEA Title I funds must be redistributed by a state in accord with the number of children in a district whose parents' annual income is less than $2,000. However, ESEA Title I is but one authority. As examples to the contrary, in Public Laws 815 and 874, the National Defense Education Act, the Education Professions Development Act, and a

number of other ESEA Titles, no such equalizing constraint is in operation. Consequently, in general, federal funds flow in a fashion which permits high SES and wealthy (high AV/PP) districts to receive as much or more federal money per pupil than low SES and poor (low AV/PP) districts.[10]

The aggregate consequence of all these financial arrangements, local, state, and federal, was displayed at the beginning of this section in Table 5. There we saw the total instructional expenditures per student in relation to residents' SES. Again, in spite of state equalization arrangements and federal funds, disproportionately available resources in high SES districts persist in penetrating any efforts now being made at equalization. In order to illustrate the raw impotence of present state equalization arrangements, Table 13 displays expenditure figures for five school districts at each end of the continuum of total expenditures per pupil.

Table 13

Total Expenditures Per Pupil for Five Highest and Five Lowest Spending Michigan School Districts, 1967-1968*

Highest Spending District Name	Total Expenditure Per Pupil
1. Whitefish School	$1,038.40
2. Republic Michigamme School	1,033.35
3. Dearborn City School District	998.74
4. Oak Park City School District	973.21
5. Bloomfield Hills School	959.54
Average (mean)	$1,000.65

Lowest Spending

District Name	Total Expenditure Per Pupil
1. Beaver Island Community Schools	$ 411.96
2. Flushing Community Schools	425.82
3. Summerfield School District	432.91
4. Three Rivers Public School District	450.88
5. Hartford Public School District	456.77
Average (mean)	$ 435.67

*Source: Bulletin 1012, Michigan Department of Education, 1968.

Revisions for the '70's

In the foregoing sections we have demonstrated that the State of Michigan and its school districts invest more resources in the schooling of higher socioeconomic status students. In this section we present a set of alternative arrangements for equalizing educational opportunity. These arrangements are based upon what we consider reasonable definitions of the educational and social goals implicit in a democratic ideology. We proceed in three stages: (1) to define equality of educational opportunity, (2) to describe the discrepancy between that definition and present reality, and (3) to suggest an alternative means for financing equal educational opportunity.

Defining Equality of Educational Opportunity[11]

In our society's present race for "spoils," not all runners begin at the same starting line. Children from higher SES circumstances presently begin life with many advantages. Their home environment, health care, nutrition, material possessions, and geographic mobility provide them with a substantial headstart when they begin schooling at age five

or six. Lower SES children begin school with more physical disabilities and less psychological preparation for adjusting to the procedures of schooling. This condition of disadvantage is then compounded by their having to attend schools characterized by fewer and lower quality services.

What must we do if schooling is to compensate for these disparities and to provide equality of opportunity? What actions are implied in such a goal? In responding to these questions it is important from the outset to make clear that we are referring to equality of opportunity among groups of individuals, that is, by race, socioeconomic status, residence in city or suburb, and so on. We recognize fully that genetic differences and variations in other characteristics among individuals within such groups will continue to promote within-group differences in attainment. However, we reject explicitly the necessity of having differences among groups with regard to the equality of their opportunity. Equality of opportunity implies strongly that a representative individual of any racial or social grouping has the same probability of succeeding as does a representative individual of any other racial or social grouping. Stated in another way, given equality of opportunity, then there should be a random relationship between the social position of parents and the lifetime attainments of their offspring.

We believe strongly that the task of the school is to equalize opportunities among different social groupings by the end of the compulsory schooling period. This belief is reinforced by the fact that most states require all minors to attend schools until at least age sixteen. Inferred

from this mandate is the view that formal schooling will enable representative youngsters from all social and racial groups to begin their post-school careers with equal chances of success. In a true sense, while the race for spoils will still be won by the swiftest, if schools are functioning properly, then typical individuals from all social groups should be on the same starting line at age sixteen. Our society would wish that representative children of each social grouping begin their adult lives with equal chances of success in matters such as pursuing further schooling obtaining a job, and participating in the political system. It would seem that equality of educational opportunity could be interpreted in no other way.

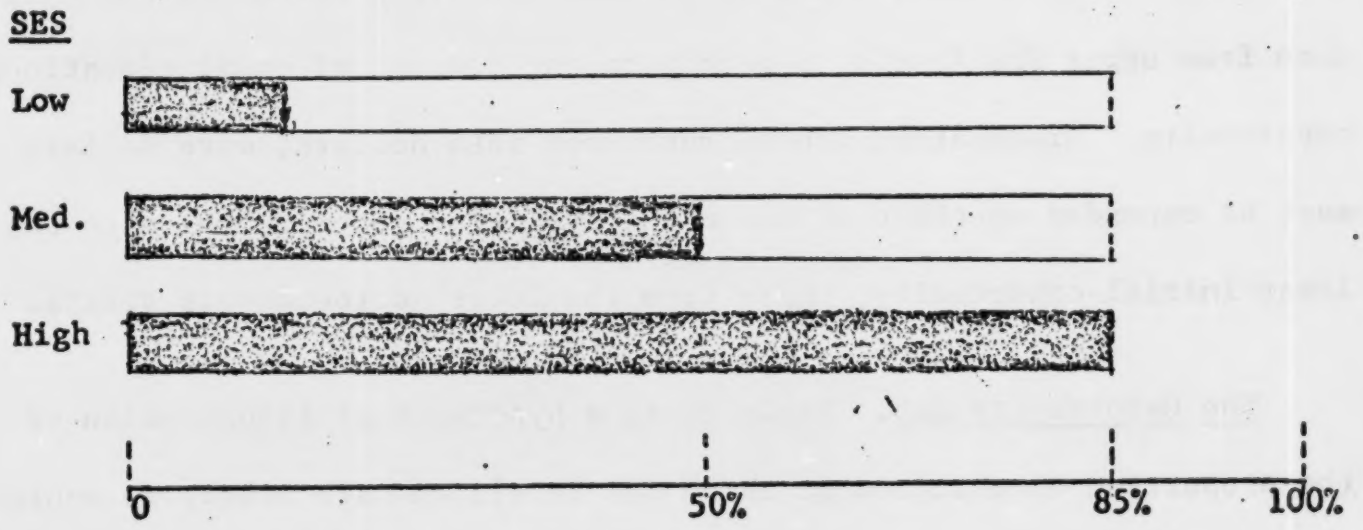
But if children born at different SES levels are to have the same set of opportunities at age sixteen, though starting off with different chances of success at age five, equal amounts of school resources for children at each level will not suffice. Clearly, those children who begin their schooling with the greatest disadvantage must have disproportionately greater schooling resources in order to equality opportunity at age sixteen. Of course, as we have documented for Michigan, the present operation of schools leads to greater schooling resources for children from upper SES levels, a parody on the concept of equal educational opportunity. Translating school resources into dollars, more dollars must be expended on those children who typically enter school with the least initial opportunity, those from the lower socioeconomic strata.

The Opportunity Gap. Table 14 is a hypothetical illustration of the proportion of children at three SES levels who are likely to achieve

"lifetime success." Success can be thought of as a hypothetical set of generally desired outcomes. Examples of such outcomes on which a favorable consensus might be derived include lifetime income and occupational attainment. In this illustration only about fifteen per cent of the low income children are likely to achieve "lifetime success," while fifty per cent and eighty-five per cent of the medium and high SES children, respectively, should attain that goal. Yet, equality of educational opportunity requires that at the end of that period of social investment in schooling, all social and racial groups should have an equal probability of achieving success. The gap between equal opportunity and actual opportunity is represented by the white portion of the bar graph for the low and medium SES groups. That is, the opportunity gap is greatest for the low SES group, smaller for the medium SES group, and almost nonexistent for the highest group.

Table 14

Proportion of Children at Three SES Levels
Who are Likely to Achieve "Lifetime Success"
(A Hypothetical Representation)



Capital Embodiment and Opportunity. An appropriate means of illustrating the cause and magnitude of the opportunity gap is to conduct an analysis in the context of human capital development. Beginning in the 1950's economists have employed the human capital approach to understand the process of increasing social and private well-being through investing in the health, education, and training of people.[12] Briefly, economists have found that financial investments in raising the health and proficiences of human beings yield substantial social and economic dividends to society. Indeed, when translated into monetary terms, productivity and earnings attributable to human capital investment generally exceed the rate of return associated with investments in physical capital.[13]

The concept of human capital investment is readily applicable to our concern with the opportunity gap. To a large extent, differences in opportunity among individuals from different SES levels represent differences in the amount of capital investment embodied in them. Investment in human capital, then, is defined as resources that are devoted to an individual's growth, investments which increase his proficiencies. And, at present, both the family and our larger society invest more resources in the growth and development of higher SES children than they do for lower SES ones.

Even before birth, the lower SES child is more likely to face prenatal malnutrition, and in his early years he is a prominent candidate for protein starvation.[14] He is less likely to receive adequate medical and dental care as well, so he is more prone to suffer from a large

variety of undetected, undiagnosed, and untreated health problems. The meager income levels associated with lower SES children typically translate into less adequate shelter and a more modest overall physical environment. These factors are less likely to stimulate cognitive development than are the richer and more varied material surroundings of his higher SES peers. Limited family income, also, inhibits or precludes travel and exposure to the large variety of worldly experiences that increase the knowledge and sophistication of the more advantaged child. Finally, and perhaps most important, both the quality and quantity of parental services tend to be less for the lower SES child. Lower SES children are more likely to receive limited parental attention because they are frequently situated in families with many children and where one or both parents are missing.[15] Further, the low educational attainment levels of lower SES adults limits the amount of knowledge they can transmit to their children. This is a particular drawback in the area of verbal skill development,[16] an area upon which school success depends so heavily.

Perhaps the most important component of parental investment related to SES is that of educational services provided by parents. Apparently parents with greater educational attainment themselves inculcate in their children much higher skill levels than do parents with less education. Indeed, the greater investment of human capital embodied in children from families with higher educational attainment can be estimated in terms of dollar values. That is, a parent, and particularly a mother, has the option of working or providing services to her children. The

higher the educational level of the parent, the greater the value of that parent's services in the labor market, and therefore, the greater the imputed value of parental services in the home. A parent with higher educational attainment must forego a larger amount of income in order to stay home with children than a parent with lower attainment. Indeed, the educational level of parents, multiplied by the time that they invest in their children, can be converted to approximate dollar amounts of capital embodiment in each child. This can be accomplished by valuing parental educational efforts according to the market value of such services (of course, market value of services is in turn determined strongly by parents' education).[17]

Dennis Dugan, an economist, has constructed such estimates for a national sample of children. He presents calculations of the total value of parental educational services embodied in children at various age levels according to the educational level of the parents.[18] These calculations are based upon ". . .(1) the proportion of a mother's time devoted to educationally related activities (as opposed to household chores), and (2) the number of children among whom the mother's time is divided."[19] The estimated amount of father's time devoted to educational activities of his children is derived similarly.

For purposes of illustration, we will display only the value of mother's educational investment in children at different grade levels by educational attainment of mother. Table 15 contains these results for 1965. The figures shown are dollar values of accumulated educational services invested in the child by one source, the mother.

Table 15

Value in 1965 of Mother's Educational Services for Mother's Educational Attainment by Grade of Child*
(All amounts in 1966 dollars)

Mother's Education	Grade 1	6	9	12
Elem. School				
0-7 years	$2724	$ 3412	$ 4126	$ 4989
8 years	3379	4231	5135	6235
High School				
1-3 years	3972	5012	6094	7409
4 years	6964	8898	10797	13080
College				
1-3 years	7091	9051	10995	13365
4 years	9044	11560	14076	17148
5+ years	9322	11919	14644	17978

*Source: Dennis Dugan, "The Impact of Parental and Educational Investment upon Student Achievement," p. 8.

According to the above displayed estimates, the six-year-old whose mother is a high school graduate has had twice as large a maternal investment as the child whose mother terminated her education at elementary school. The child of a college graduate has 2.7 times the investment from this source as the offspring of an elementary school graduate. These figures illustrate the substantial inequalities in human capital formation among children of different SES levels as they begin their formal schooling. Over the period of schooling, while all the values increase for all groups, the ratio of inequality remains constant.

Moreover, values of mother's and father's contributed educational services represent excellent predictors of academic success at grade one.

That is, differences in human capital formation at grade one are related to differences in academic performance. For example, Dugan found that measures of human capital embodiment explain approximately ninety-five per cent of the variance in pupil verbal skills for white first graders and eighty-eight per cent of the variance for nonwhite first graders.[20] Stated in another way, there is a close correspondence between the value of embodied parental services and a child's academic achievement or between the investment in a child and the academic returns to him.

Dugan also addresses himself to the relative efficacy in raising academic performance of dollars invested in school services. That is, he estimated the combined effect of parental investment and school investment on student achievement. In this way he attempted to approximate the amount of additional school investment in lower SES children which might be needed to place them on an academic par with the higher parental investment in their higher SES peers. His results are interesting, but they are limited by the use of an inadequate expenditure measure.[21] Nevertheless, he presents a provocative finding with regard to equalizing academic performances of whites and nonwhites. Dugan found ". . .that an additional $6,662 per nonwhite student is required to raise the nonwhite mean achievement ot the level of the white achievement mean for sixth graders."[22] Distributed over the first five years of school, this translates to a mean annual expenditure of approximately $1,300 a year per nonwhite pupil above the amount which was being spent, about $400. The point is that if we are addressing ourselves to equal educational outcomes, then substantially higher dollar amounts must be spent on school services for lower SES children.

Implications for School Finance

Before outlining specific approaches for financing schools for equal opportunity, it is useful to make some general statements. Most important, we wish to emphasize that there are many possible ways of implementing true equality of educational opportunity. The actual choice of a plan is as much a function of taste and judgment as it is of technical public finance. Administrative criteris, political expendiency, tradition, and other factors must all be taken into account in identifying specific arrangements for guaranteeing to all children what the law has promised. The purpose of this preliminary comment is to make the reader aware, explicitly, that the following are but illustrations of means for modifying financial arrangements. They are not presented as the only approaches nor as optima. Rather they are suggested as points of departure along which change might be initiated.

An Illustrative Approach. The ability of a local school district to generate revenue from property taxes should not be allowed to serve as the primary determinant of the quality of school services it offers to children. However, the property tax is not totally devoid of merit.[23] Indeed, some experts believe ". . .that it would be far better to strengthen this levy than to plan for its eradication."[24] In keeping with this view, our prescription is to employ a uniform and relatively low state-wide property tax as a partial means for financing schools. In this form, most of the disadvantages of the property tax are eliminated while retaining the practical advant of being able to tap a commercial source of revenue that might be lef substantially untouched under other forms of

taxation.[25] The revenues needed in excess of those generated from the application of a minimum state-wide property tax levy would come from state general funds to be raised through means such as income taxes, sales tax, and the like. Because of the substantial equities associated with the income tax as a revenue raising procedure, we are predisposed toward a heavy reliance upon it as the primary means for generating the state's direct dollar contribution for education.

The state would determine the per-pupil school service expenditure requirement for children at each level on the SES spectrum. In general, the per-pupil requirement would vary inversely with the SES level of the students being served. Table 16 displays a hypothetical index of per-pupil expenditure requirements by SES level. In this table each number represents the multiple of some arbitrary dollar amount. For example, if 1 is equal to $400, 2 is equivalent to $800 and so on. Exact dollar amounts are not represented for two reasons. First, dollar requirements fluctuate over time with shifts in educational priorities and changes in price levels. Second, exact dollar figures in such a table might lend the impression that expenditure requirements are easily fixed. The truth is that these dollar relationships should be estimated initially and might have to be altered over the long run to approximate the differential costs of schooling different populations. Thus, Table 16 depicts a general pattern where units of expenditure and their multiples are presented as the appropriate heuristic model. Of course figures in this table are suggestive rather than ones based on precise estimates of need. However, the pattern of dollar requirements is meant to represent one which would more nearly approach equality of educational opportunity than does the present scheme.

Table 16

Hypothetical Expenditure Index for
Equality of Educational Opportunity

	School Level		
SES Level	Preschool	Elementary	Secondary
High	--	1.50	2.00
Medium	1.00	2.25	3.00
Low	2.00	3.00	4.00

Because high SES children tend to receive such a high educational endowment in their home, the scheme in Table 16 suggests that no public preschool provision is necessary in order to fill their needs. On the other hand, the preschool period represents an ideal time for disproportionate investment to begin for lower SES children. The efficacy of preschool investment has been widely noted in both the child development literature and in practice.[26] Indeed, some particularly productive preschool programs, such as the one in Ypsilanti, Michigan, have produced substantial and long-lasting gains in achievement.[27] Accordingly, Table 16 suggests that medium SES children be provided with one-half day of preschool instruction at 1 unit per child and lower SES children receive a full day of preschool education at 2 units per student. Alternatively the state could choose to enroll lower SES students on a half-day basis for two years while medium SES children would attend for only one year. That is, the lower SES child would begin his preschool experience at the age of three while the middle SES child would start at age four.

Expenditures at the elementary and secondary level, as presented in

Table 16 also reflect the pattern required for an equal opportunity approach. The higher expenditures for all groups at the secondary level are based upon the necessity for greater specialization (and thus higher qualifications for and larger numbers of personnel)at that level. Many states already take these differences into consideration when apportioning aid to local school districts. The salient characteristics of the requirements at all levels of the matrix is that the schools must expend greater dollars on lower SES groups in order to close the "opportunity gap."

One necessary adjustment in a SES expenditure matrix such as that presented in Table 16 would be for differential costs. The dollars available to a school district should be weighted so as to balance dollar differences in items such as land prices, labor costs, and salary level differentials between rural, urban, and suburban areas.

Once the state's expenditure requirements are established, the task becomes that of financing those requirements. The following method, or a variant of it, could be used to generate the required financial support. First, the state would require every local school district to levy a property tax at some uniform and relatively low rate. For example, a rate of 10 mills might be appropriate. The dollar difference between what this levy raised for the students in each school district and the state requirements for equal opportunity for those students would be allocated from state funds to each local school district. These revenues would be derived from general state sources with heavy reliance upon state income and sales taxes.

Obviously the equal educational opportunity requirement for a school

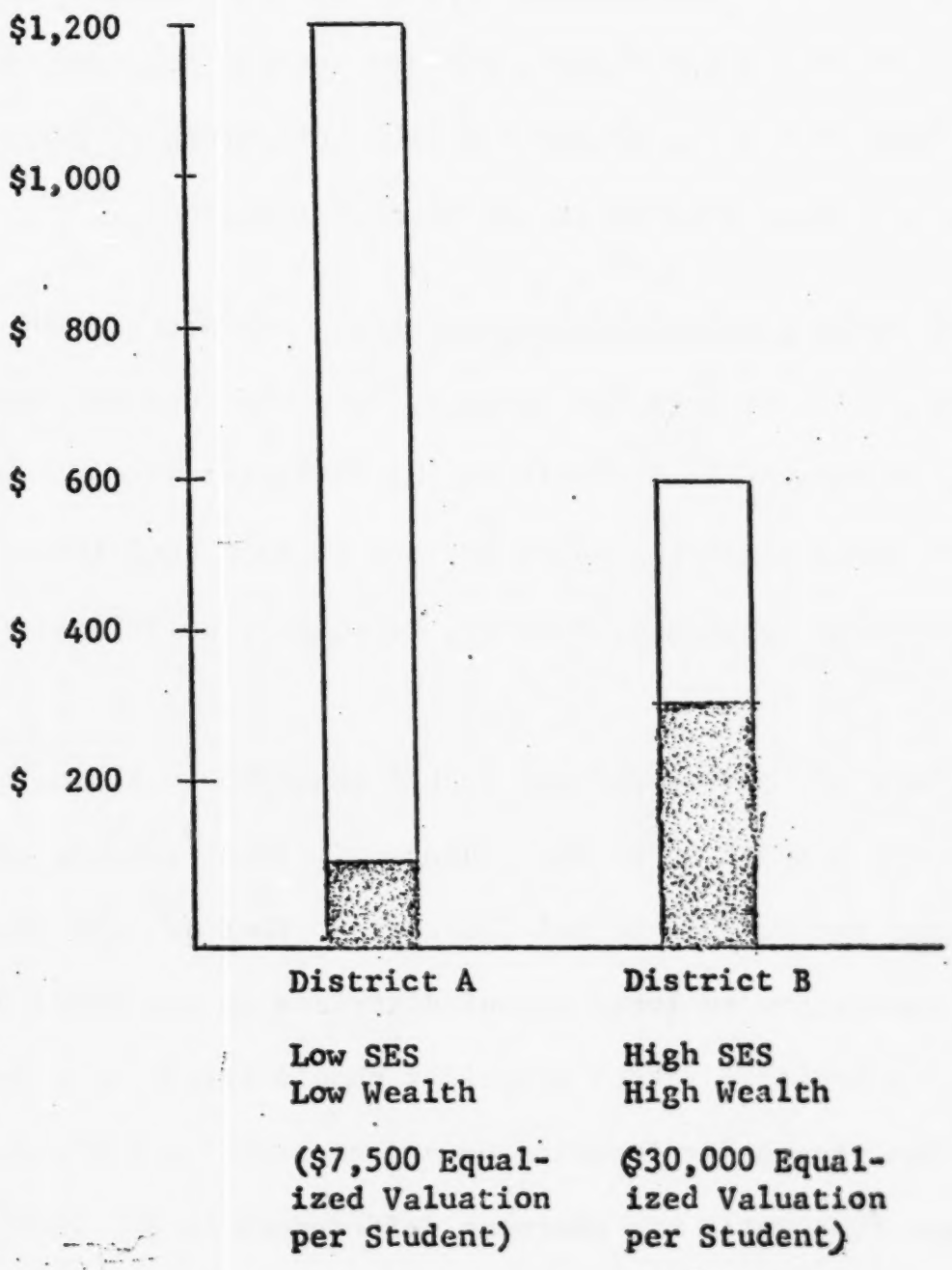
district would be based upon a weighting scheme where the dollar amounts required for each district would be based upon the relative number of students in each SES group and the distribution of these across each schooling level. Now having presented the overall plan it is useful to provide an example of how it might operate. In order to simplify the illustration, we will use the hypothetical unit requirements for elementary children suggested in Table 16, and we will let each unit of expenditure be equivalent to $400.

Table 17 displays the proposed financing arrangement for two school districts, A and B. District A is assumed to contain all low SES children of elementary school age. It is also a relatively low wealth district with only $7,500 of equalized assessed valuation (of the property tax base) for each student. On the other hand, District B is inhabited by upper SES residents, and its property tax base is substantial, $30,000 of equalized assessed valuation per pupil.

Applying the uniform tax rate of 10 mills to both districts yields $300 per student in District B and only $75 per student in A. But the state requirement for low SES elementary school students (taken from Table 16) is $1,200 per student and for high SES students the requirement is $600 per pupil. Therefore the state would grant $1,125 per pupil to District A and $300 per pupil to B. In this way the state would fill the gap between the local contribution where uniform tax effort is mandatory and the state requirement for equal educational opportunity. This approach might be termed a "variable level" foundation program since the state requirements represent expenditure foundations below which support cannot fall.

Table 17

An Illustration of Proposed Financing Arrangement for Achieving Equality of Educational Opportunity



Any suggested changes in financing the schools will be characterized by transitional problems. In such a complex area as education and its financial foundations, utopia can be approached, but it is not likely to be attained. Yet, we believe that the obstacles surrounding effective financing for equal educational opportunity are indeed surmountable. The point is that great strides forward are not costless, but they are nevertheless worthwhile if the benefits sufficiently exceed the costs, as we believe that they do in the present instance.

Implementing Financial Arrangements. Any alternative financial arrangement that strives for equality not only must be theoretically sound; it also must lend itself to the realities of implementation. The above-described financing model appears to meet both these criteria. It is particularly important, however, to suggest guidelines for implementation.

Perhaps the most important change required in financial arrangements is for state support to be based upon individual schools as units of expenditure rather than school districts. That is, the state should provide assistance to local school districts on the basis of school-by-school calculations; school districts should spend those dollars accordingly. The reason for focusing on and emphasizing individual schools is that there frequently are enormous differences in SES levels between schools within single districts. If funds are provided to school districts on the basis of district average SES, there is too little assurance that the money will be distributed to individual schools on the basis of school SES. Indeed, where school districts have been examined

on a school-by-school basis within large cities, it has been demonstrated that poor and black children attend schools which are considerably less endowed than those attended by their white, middle class counterparts. Dollar expenditures tend to be lower; and, in some cases, even compensatory monies allocated specifically for schools serving children from low income families have been siphoned off to support general school services throughout the districts.[28]

One obvious means by which funds can be conveyed directly to the schools for which they are intended, while retaining present school district boundaries, is (1) to allocate locally generated revenues from the state's mandatory millage levy to all schools within the district on a per-student basis. (2) From the state requirements matrix (Table 16) compute the dollar amount per-student needed in each school to attain equality of opportunity. (3) Grant local school districts financial support equal to the difference between the amount raised by mandatory millage and the state requirements computed for all schools in the district. (4) Require a school-by-school financial accounting each year to ensure that monies intended for particular schools were, in fact, expended in those schools. That is, unlike the present line-item accounting system in which expenditures are reported only for the district, the state must require information on a school-by-school basis in order to guarantee equity among schools. Otherwise the leakages which presently deprive low SES students of additional state and federal resources will persist. A mandatory school-by-school accounting system is necessary if the conduits between state coffers and low SES schools are efficiently to convey resources to the schools for which they are intended.

One further point in favor of using the school rather than a school district as a unit of financial analysis is that it is probably easier to obtain accurate SES information on a regular basis for the smaller units. In a study conducted for New York State, Walter I. Garms and Marck C. Smith demonstrate that it is feasible to develop an SES-related measure of educational need from information which can be provided readily by school principals.[29] They suggest that an index of resource need be computed from information such as the percentages of various specified racial and ethnic minority group students, the percentage of children from broken homes, the average number of schools attended by pupils in the last three years, and the average number of years of schooling of the father, if present, otherwise the mother. These variables in linear combination predict approximately 70 per cent of the school-to-school variation in reading and mathematics achievement.[30] Other measures might be developed at the individual school level which are also easily compiled and which are more appropriate for discerning differences in SES in rural areas. Garms and Smith also suggest ways in which the measure of school resource need can be woven into a state school finance formula.

Financing for Equality and School Administration. The state must necessarily assume the dominant role in financing schools for equality, and this poses a provocative question. Under the present system of school finance in most states, the state decides many of the regulations and policies relevant to local school district operation. Personnel licensing, curriculum requirements, staffing ratios, and mandatory

expenditure levels are but a few of the areas in which states typically dictate educational practices. Given these procedures, it is entirely possible that if the state increases its level of financial support to the schools, it will also attempt to increase its operational influence over the schools.

Greater central administration from the state with its almost inevitable imposition of greater operational uniformity would be exceedingly counterproductive for two reasons. First, the variety of educational needs that confront particular schools and school districts cannot be met by increased standardization among schools. Good education is individualized, meaning that decisions affecting each child's instruction should be made as close to that child as possible. The state level is clearly an inappropriate plane upon which to make such decisions.

A second reason for resisting increased state operation is the sheer technical difficulty in administering large numbers of schools. Schooling is an activity characterized by substantial inefficiencies once a critical threshold of individual school or school district enrollment is exceeded. The nature of schooling is such that large scale bureaucracy appears incapable of managing them by any but the most mummified means. Instructional innovation and personal flexibility both seem to disappear in large school districts. With the exception of school districts so small that they cannot provide a reasonable range of services, large operational units are a deterrent to good education.[31] An extensive survey of the related literature suggests that diseconomies of scale (inefficiencies and higher costs) are characteristic of school districts

with enrollments in excess of 10,000 students in average daily attendance.[32] It is little wonder, then, that many school districts throughout the nation either already have or are under pressure to decentralize their operations.

In short, there are sound reasons for allowing most local school districts to continue to administer their schools without additional state regulations encumbering them. Indeed, a far better case can probably be made for decentralizing decision making for the schools beyond the degree to which it presently exists.[33]

* * * * *

Persons suffering from educational handicaps are caught in a downward spiraling cycle of despair. On one hand they are tempted on almost every side by the advantages that can be achieved with the assistance of good schooling. On the other hand, their own pursuit of such objectives is frequently brought to an abrupt halt by the inadequacy of their education. For them as individuals the goals of our society become relatively meaningless. At best they are left to experience frustration and defeat. At worst, they may be propelled into a life of crime and decadence. From the perspective of the entire society, this human wastage is a double burden. Not only do the undereducated not contribute their share, but also everyone else is deprived of the benefits of those individuals who, if properly schooled, could have contributed more than their share. We have long since passed the point in our development where we

can tolerate vast numbers of unskilled and underdeveloped individuals.

In this paper we have set forth a new conception of equality of educational opportunity and described new means for pursuing that goal. We are not wedded to the specifics of our proposed approach, but we are wedded to the general need for change. The gravity of the present inequitable situation is immense, yet it is difficult to motivate concern among those who possess the greatest ability to remedy the situation. If allowed to persist, present disparities in school services will almost inevitably undermine our society.

Societies which have persisted longest throughout history appear to be those which have avoided vast social and economic differences among major segments of their populations. Clearly the relative success of the United States in avoiding such extremes has been fostered significantly by the past successes of our schools. Today, however, because of a shortage of resources and an inappropriate distribution of the resources which are available, schools are no longer so successful. The preservation of equal opportunity and the reality of an open society wherein individuals rise or fall in accord with their interests and abilities demands a restructuring of present arrangements for the support and provision of school services.

Notes and References

1. See: Willard Waller, The Sociology of Teaching (New York: John Wiley and Sons, Inc., reprinted 1965); James Bryant Conant, Slums and Suburbs (New York: McGraw Hill, Inc., 1961); John W. Gardner, Excellence (New York: Harper and Row, 1961); and Charles S. Benson, The Cheerful Prospect (Boston: Houghton Mifflin, 1965).

2. The fourth arrow illustrates a feedback loop wherein the process sequence is presumed to have effects over generations. The father's post-school success influences his children's social position, and so on for their children.

3. An independent variable which could be used in addition to or in place of "socioeconomic status," is race or minority group membership. That is, many of the disparities we hypothesize as occurring as a consequence of an individual being of lower socioeconomic status might also be hypothesized as occurring as a consequence of an individual being a member of a minority racial or ethnic group. The primary reason for not pursuing such a line of inquiry was lack of suitable data across school district boundaries. In addition, however, "socioeconomic status" is a more inclusive concept which encompases those minority groups whose members tend to appear in disproportionate numbers in lower socioeconomic strata, as well as members of the majority.

4. J. Alan Thomas, School Finance and Educational Opportunity in Michigan (Lansing: Michigan Department of Education, 1968).

5. Also, the evidence for proposition 2 regarding school service quality and student achievement is contained in James W. Guthrie and others, "A Survey of School Effectiveness Studies," Chapter 2 of Do

Teachers Make a Difference (Washington, D. C.: U. S. Government Printing Office, 1970). Evidence supporting proposition 3 regarding student academic achievement and post-school performance is contained in Henry M. Levin and others, "School Achievement and Post-School Opportunity: A Review," forthcoming in The Review of Educational Research.

6. H. T. James, James A. Kelly, and Walter I Garms, Determinants of Educational Expenditures in Large Cities of the United States (Stanford: Stanford University, 1966), Chapter IV. In this same regard, see Harvey Brazer, City Expenditures in the United States (New York: National Bureau of Economic Research, 1959); Thomas R. Dye, "Politics, Economic and Educational Outcomes in the States," Educational Administration Quarterly, Vol. III, No. 1 (Winter 1967), pp. 28-47; Jerry Miner, Social and Economic Factors in Spending for Public Education (Syracuse: Syracuse University Press, 1963); and Seymour Sacks and Robert Harris, "The Determinants of State and Local Government Expenditures and Intergovernmental Flows of Funds," National Tax Journal, Vol. XVII (March 1964).

7. Michigan has an arrangement whereby "County Allocation Boards" control 15 mills on the property tax. Our analyses demonstrate that these boards tend to allocate a greater proportion of this total to high SES districts than they do to low SES districts. As a consequence, low SES districts must more frequently appeal to their residents in tax override elections.

8. A dramatic example of municipal overburden is provided by Detroit which in 1967-1968 had the second lowest tax rate for schools but highest

total municipal tax rate when compared to nineteen of its surrounding suburban school districts.

9. Kenneth B. Simon and Vance W. Grant, Digest of Educational Statistics (Washington, D. C.: U. S. Government Printing Office, 1967).

10. A great deal of the federal money which is redistributed by a state is done so on the basis of project proposals submitted by local districts to state authorities. It generally is the wealthier districts which have the personnel available to write the proposals. Moreover, if the program requires matching funds, such as with NDEA Title III, then poor districts are at a disadvantage to put up the local district's share. For a more detailed description of the inequities involved in the redistribution of federal funds, see James W. Guthrie and Stephen B. Lawton, "The Distribution of Federal School Aid Funds: Who Wins? Who Loses?" Educational Administration Quarterly (Winter 1970); and I. T. Johnson, "An Evaluation of NDEA Title III," Phi Delta Kappan, Vol. XLVIII, No. 10 (June 1967).

11. Almost the entire issue of the Winter 1968 Harvard Educational Review (Vol. 38, No. 1) is devoted to the topic of "Equal Educational Opportunity." The article entitled "The Concept of Equality of Educational Opportunity," by James S. Coleman provides historical perspective on the development of the concept.

12. For more information on the human capital concept, see Gary S. Becker, Human Capital (New York: Columbia University Press, 1964).

13. For a review of several studies in this area, see Theodore W. Schultz, "The Rate of Return in Allocating Investment Resources to Education," The Journal of Human Resources, Vol. II, No. 3 (Summer 1967), pp. 293-309.

14. See Nevin S. Scrimshaw, "Infant Malnutrition and Adult Learning," Saturday Review, Vol. 51, No. 11 (March 16, 1968), pp. 64-66.

15. For a discussion of the effect of family structure, see Lee Rainwater and William L. Yancey (Eds.), The Moynihan Report and the Politics of Controversy (Cambridge: MIT Press, 1967).

16. See, for example, Ellis G. Olim, Robert D. Hess, and Virginia Shipman, "Role of Mothers' Language Styles in Mediating their Preschool Children's Cognitive Development," School Review, Vol. 75, No. 4 (Winter 1967), pp. 414-424; and Robert D. Hess, "Maternal Behavior and the Development of Reading Readiness in Urban Negro Children," a paper prepared for the Claremont Reading Conference, Claremont, California, February 10, 1968.

17. It is important to make clear that the dollar amounts derived in this fashion are only indicators of the differences in parental investment between lower and higher SES children. They are meant to be illustrative rather than conclusive. Most important, they are meant to measure the difference in capital embodiment between children at different SES levels attributable to only one component of human investment, parents' services. Differences in human capital due to differential investment in health, nutrition, physical environment, and other factors are not measured directly in our estimates.

18. See Dennis J. Dugan, "The Impact of Parental and Educational Investments upon Student Achievement," a paper presented at the Annual Meeting of the American Statistical Association, New York City (August 21, 1969), mimeo.

19. Ibid., p. 5.

20. Ibid., Table 3.

21. He used state averages for expenditure rather than district-wide or school averages. The latter are the most appropriate for this type of analysis, but they are not always available.

22. Dennis Dugan, op. cit., p. 24.

23. For a detailed discussion of the advantages and disadvantages of the property tax, see Dick Netzer, Economics of the Property Tax (Washington: Brookings Institution, 1966), Chapter VII.

24. Jesse Burkhead, State and Local Taxes for Public Education (Syracuse: Syracuse University Press, 1963), p. 105.

25. Admittedly, this is a matter of practicality. If business firms are to be taxed to support local or state government, it is more reasonable and theoretically more efficient to tax them on the basis of their output as measured by value-added than to tax them on the basis of their real property, equipment, and inventories. On a practical basis, it is probably easier to levy and administer a property tax than what is owed on value-added. See Harvey E. Brazer, "The Value of Industrial Property as a Subject of Taxation," Canadian Public Administration, Vol. 55 (June 1961), pp. 137-147.

26. For some of the research basis supporting formal educational preschool experiences for lower SES children, see Benjamin S. Bloom, Stability and Change in Human Characteristics (New York: John Wiley and Sons, 1964).

27. For a description of the Ypsilanti program, see David P. Weikart, Preschool Intervention: A Preliminary Report of the Perry Preschool Project (Ann Arbor, Michigan: Campus Publishers, 1967). For an

evaluation of the Ypsilanti program and other programs for disadvantaged children, see D. Hawkridge, A. Chalupsky, and A. O. H. Roberts, "A Study of Selected Exemplary Programs for the Education of Disadvantaged Children," Final Report, U. S. Office of Education Project No. 089013 by American Institute of Research, Contract No. OEC-0-8-089013-3515 (010) (September 1968).

28. For evidence of within-district financial discrimination, see Henry M. Levin, "Decentralization and the Finance of Inner-City Schools," Stanford Center for Research and Development in Teaching, R&D Memo No. 50 (May 1969), mimeo; to be published in Fiscal Planning for Schools in Transition: Restructure, Reform, or Revolt (Washington, D. C.: National Education Association, in press). Poignant evidence of misallocation of funds intended for low SES schools in found in a California State Department of Education report for the City of Oakland. Oakland had received $10 million in federal funds to aid some 12,000 ghetto youngsters. Instead, much of the money was spent for services throughout the district. Thus, while financing was provided to give all ghetto elementary school children additional reading and language arts instruction, only 2 out of 5 actually received such assistance. Of 477 staff positions approved for the "target" schools, only 276 employees could be accounted for (the funds for the other positions presumably were financing personnel at other schools). Further, one-third of the total budget for instruction supported administrators working in the district's central office. This resulted in a severe understaffing of schools for which the federal and state governments had designed the grants. See the review of the report

in This World, San Francisco Sunday Examiner and Chronicle (August 3, 1969), pp. 5 and 6.

29. See "Development of a Measure of Educational Need and its Use in a State School Support Formula," Report on the Study of the New York State School Support Formula, Staff Study No. 4 (Albany, New York: New York State Conference Board, June 1969).

30. Ibid., p. 47.

31. See Roger G. Barker and Paul V. Gump. Big School, Small School (Stanford: Stanford University Press, 1964).

32. See H. Thomas James and Henry M. Levin, "Financing Community Schools," presented at the Brookings Institution conference on the community school, December 12-13, 1968; published in Community Control of Schools (Washington, D. C.: Brookings Institution, 1970), edited by H. M. Levin.

33. Ibid.

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